REMARKS

Claims 7 and 17 have been canceled. Claims 1, 2, 6, 9, 12, and 14-16 have been amended. Claims 18-23 have been added. Claims 1-6, 8-16 and 18-23 are pending.

In view of the above amendments and the following remarks, Applicants respectfully request allowance of the application. The Applicant's remarks follow the Examiner's comments shown in a smaller, bold font.

Attached is a marked-up version of the changes being made by the current amendment.

Specification

The application was objected to because the abstract should avoid the use of "disclosed" in the phrase, "Methods and apparatus . . . are disclosed."

The abstract has been amended to remove the phrase "are disclosed" as objected to in the office action.

Applicants submit that the amendment overcomes the objection to the abstract and request withdrawal of the objection.

Claim Rejections – 35 U.S.C. §112

4. Claim 9 is rejected under 35 U. S. C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how the location of the optical element can be a location other than the center of the optical element. For examination purposes, the examiner will assume that the claim was intended state that the location of the optical element is a location other than the center of the module.

Claim 9 has been amended to clarify that the location on the optical element is a location other than the center of rotation of the optical element. Support for this amendment is found, for example, in the specification at page 7, lines 1-5 and recited in claim 14, line 5.

In view of the above amendment and remarks, Applicants respectfully request withdrawal of the 35 U.S.C. 112 rejection.

Claim Rejections – 35 U.S.C. §102

6. Claims 1, 5-6, 9-14 and 16 are rejected under 35 U. S. C. 102(e) as being anticipated by U. S. Patent No. 6,430,337 to Bergmann et al.

Referring to claim 1, the prior art discloses all of the limitations of the claimed in/ention. Bergmann et al. discloses an optical alignment system, including: an optical element having a specified response at a first location; and a mechanism for redirecting incident light to a second location on the optical element so as to achieve a desired response other than the specified response. Figures 7-9 show the aligning of the optical device. The device has a specified response (high signal loses) when not properly aligned, while achieving a desired response (optimal alignment with low signal loss) when properly aligned.

Referring to claim 5, the prior art discloses all of the limitations of the claimed invention. Bergmann et al. discloses that the incident light is redirected along a path offset from an axis formed by the center of the optical element. See Figures 2-5, that shows incident light offset from an axis formed by the center of the optical element.

Claim 1 has been amended to recite a limitation of claim 2 that the optical element comprises a thin-film filter. Claim 1 should be allowable and Applicants respectfully request withdrawal of the 35 U.S.C. 102 rejection of claim 1.

Claims 2-5 depend from 1, and should be allowable for at least the same reasons.

Referring to clam 6, the prior art discloses all of the limitations of the claimed inlention. Bergmann et al. discloses an optical alignment system, including: a module having a center of rotation (318); an optical element (326) having a center of rotation and being affixed to the module such that the center of rotation of the optical element is offset from the center of rotation of the module; a mechanism for redirecting light, the mechanism including a wedge (328)wherein the redirecting mechanism redirects incident light to a location on the optical element. See Figures 5, 7-9.

Referring to clam 9, the prior art discloses all of the limitations of the claimed indention. Bergmann et al. discloses the location of the optical element (326) is a lomzation other than the center of the optical module (318).

Referring to claim 10, the prior art discloses all the limitations of the claimed indention. Bergmann et al. discloses the location is selectable so as to produce a desired response. Bergmann et al. discloses that the location of the incident light is adjusted to achieve optimal alignment.

Referring to claim 11, the prior art discloses all the limitations of the claimed indention. Bergmann et al. discloses that the redirecting mechanism is configured to redirect light along a path, which is substantially parallel to and offset from an axis normal to the center of rotation of the module. See Fig. 5.

Claim 6 has been amended to include the limitations of claim 7. The office action stated that claim 7 would be allowable if written in independent form including all the limitation of the base claim and any intervening claims. Claim 7 depended directly from base claim 6 and, thus, the amended claim 6 is the equivalent of claim 7 written in

independent form. Applicants respectfully request withdrawal of the 35 U.S.C. 102 rejection of claim 6.

Claims 9-11 depend from claim 6, and should be allowable for at least the same reasons.

Referring to claim 12, the prior art discloses all the limitations of the claimed method. Bergmann et al. discloses a method of aligning an optical system, including: prllviding an optical element having a specified response at a predetermined location ard providing incident light to a location o the optical element so as to achieve a desired re, sponse. The device has a specified response (high signal loses)when not properly aligned, while achieving a desired response (optimal alignment with low signal loss) when properly aligned.

Referring to claim 13, the prior art discloses all the limitations of the claimed method. Bergmann et al. discloses that incident light is redirected along a path offset from an axis formed by a center of the optical element.

Claim 12 has been amended to recite that the optical element includes a filter having a plurality of responses. No new matter has been added. Claim 12 should be allowable and Applicants respectfully request withdrawal of the 35 U.S.C. 102 rejection of claim 12.

Claim 13 depends from claim 12 and should be allowable for at least the same reasons.

Referring to claim 14, the prior art discloses all the limitations of the claimed method. Bergmann et al. discloses a method of aligning an optical system, including: providing a module (318)having a center of rotation and an optical element (326) having a center; affixing the optical element to the module such that the center of the optical element is offset from the center of rotation of the module; applying incident light to the optical element, the incident light traveling along a path offset from the center of rotation; and rotating the module about the center of rotation until a predetermined response of the optical element is achieved. See the Figures of the reference.

Claim 14 has been amended to recite the limitation that the optical element includes a filter having a plurality of responses. No new matter has been added. Claim 14 should be allowable and Applicants respectfully request withdrawal of the 35 U.S.C. 102 rejection of claim 14.

Referring to claim 16, the prior art discloses all the limitations of the claimed invention. Bergmann et al. discloses an optical alignment system, including: a module means for rotating about a center of rotation; optical means, supported by said module means, for responding to an incident light and producing a plurality of responses; the optical means having a predetermined response at a position offset from the center of rotation; means for applying incident light to the optical means, the incident light traveling along a path offset

from the center of rotation; means for rotating the module about the center of rotation until a desired response is achieved. See the Figures of the reference.

Claim 16 has been amended to include the limitations of claim 17. The office action stated that claim 17 would be allowable if written in independent form including all the limitation of the base claim and any intervening claims. Claim 17 depended directly from base claim 16 and, thus, the amended claim 16 is the equivalent of claim 17 written in independent form. Applicants respectfully request withdrawal of the 35 U.S.C. 102 rejection of claim 16.

Added Claims

Claims 18-23 have been added. Support is found in the specification, for example, at page 6, line 16 to page 7, line 11. No new matter has been added.

Applicant asks that all claims be allowed. Enclosed is a $186 check for excess claim fees. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 12/26/02

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Version with markings to show changes made

In the claims:

Claims 7 and 17 have been canceled.

Claims 1, 2, 6, 9, 12 and 14-16 have been amended as follows:

1. (Amended) An apparatus for tuning an optical element comprising:

[an] a thin-film filter [optical element] having a specified response at a first location; and

a mechanism for redirecting incident light to a second location on said optical element so as to achieve a desired response other than said specified response.

2. (Amended) The apparatus of claim 1, wherein [said optical element comprises a thin-film filter, and] said specified response comprises the center wavelength of said thin-film filter.

6. (Amended) An apparatus for tuning an optical element comprising:

a module having a center of rotation;

an optical element having a center of rotation and being affixed to said module such that said center of rotation of said optical element is offset from said center of rotation of said module; and

a mechanism for redirecting light, said mechanism including a pigtail having a wedge formed in a transmitting end, wherein said redirecting mechanism redirects incident light to a location on said optical element.

9. (Amended) The apparatus of claim 6, wherein said location on said optical element is a location other than said center of rotation of said optical element.

12. (Amended) A method of tuning an optical element comprising:

providing an optical element, including a filter having a plurality of responses, and having a specified response at a predetermined location; and

providing incident light to a location on said optical element so as to achieve a desired response other than the specified response.

14. (Amended) A method for tuning an optical element comprising:

providing a module having a center of rotation and an optical element including a filter, having a plurality of responses, and having a center;

affixing said optical element to said module such that said center of said optical element is offset from said center of rotation of said module;

applying incident light to said optical element, said incident light traveling along a path offset form said center of rotation; and

rotating said module about said center of rotation until a predetermined response of said optical element is achieved.

15. (Amended) The method of claim 14, wherein [said optical element comprises a filter having a plurality of responses,] said act of rotating including the act of selecting one of said plurality of responses as the predetermined response.

16. (Amended) An apparatus for tuning an optical element comprising:

module means for rotating about a center of rotation;

optical means including a filter, supported by said module means, for responding to an incident light and producing a plurality of responses, said optical means having a predetermined response at a position offset from said center of rotation;

means for applying incident light to said optical means, said incident light traveling along a path offset from said center of rotation; and

means for rotating said module about said center of rotation until a desired response from said optical means to said incident light is achieved.

Claims 18-23 have been added as follows:

18. (New) An apparatus for tuning an optical element comprising:

an optical element having a specified response to a light beam incident at a first location; and

a rotator for rotating the optical element to position the incident light beam at a second location on the optical element having a desired response other than the specified response.

19. (New) The apparatus of claim 18 wherein the optical element comprises a filter.

20. (New) The apparatus of claim 19 wherein the specified response comprises a center wavelength of the filter.

21. (New) A method for tuning an optical element comprising:

applying an incident light beam to a first location on an optical element having a specified response to the light beam at the first location; and

positioning the optical element so that the light beam is incident at a second location on the optical element having a desired response other than the specified response.

22. (New) The method of claim 21, wherein the optical element comprises a filter.

23. (New) The method of claim 22 wherein the specified response comprises a center wavelength of the filter.

<u>In the abstract:</u>

Methods and apparatus for tuning an optical element [are disclosed.] include<u>,</u> <u>in one</u> [One] aspect<u>,</u> [comprises] an optical element having a specified response at a predetermined location and means for redirecting incident light to a location on the optical element other than the predetermined location so as to achieve a desired response.